

REMARKS

Claims 1 - 23 remain active in this application. The specification and drawings have been reviewed and editorial revisions made where seen to be appropriate. Claims 17 has been amended to improve form and clarity. Revised numbering has been supplied for claims 21 - 23 to which duplicative numbering was originally applied. Support for the amendments of the claims is found throughout the application, particularly in Figures 7 and 8 and the description thereof on pages 24 - 30 and, especially, pages 36 - 37. No new matter has been introduced into the application. The indication of the allowability of the subject matter of claims 1 - 15 and 19 - 23 is noted with appreciation.

The Examiner has objected to the formal drawings filed April 14, 2003, as failing to illustrate features of the invention recited in claims 15 - 20; specifically mentioning clipping digital values, truncating digital values, compressing digital values and filtering. No other objection to the formal drawings has been indicated by the Examiner. This objection is respectfully traversed since it is respectfully submitted that the features mentioned by the Examiner and other features recited in claims 15 - 20 are, in fact, well-illustrated in the drawings.

Specifically, Figure 6 clearly illustrates the clipping of the range of allowed digital luminance values from 0 - 255 to 16 - 235 as indicated by the legend "CCIR 601 CLIP". Truncation (in which, for example, an eight-bit byte is reduced to its six most significant bits and the remaining two bits are thus made available for a run code) is illustrated below the illustration of clipping using a dashed line and the legends "QUANTIZE TO 6 BITS" AND "0-3 RUN CODES". Additionally, a clipping circuit element is indicated at 145 of Figure 5. Truncation is a preferred part of

the compression process which is well-illustrated in Figure 8 and is reflected in that figure by illustration of a six bit luminance value concatenated with a two bit run length code in the column labeled "COMPRESSED DATA". Further compression of the preferred type is indicated by brackets labeled "0-16" and "17-32" in accordance with "0000" and "1111" flags in the same lines of the column. A filter element is shown at 190 of Figure 5 and the filter transfer function is illustrated in Figure 10, preferably applying the correction factor derived as illustrated in Figure 9. Storage for filtering is also clearly illustrated at 130, 160, 165 and/or 170 of Figure 5. Therefore, it is respectfully submitted that the claimed features of claims 15 - 20 are, in fact, well-illustrated in the drawings and reconsideration and withdrawal of this objection are respectfully requested.

Nevertheless, upon review, the need for minor revisions of Figures 1, 6, 8 and 9 has been noted and substitute formal drawing sheets containing these Figures are submitted herewith. Accordingly, approval of the formal drawings including the substitute drawing sheets is respectfully requested in the next office action.

The Examiner has noted that incorrect numbers were applied to claims 21 - 23 in the original application papers. However, aside from referring to these claims as claims "21 - 23" the Examiner does not indicate that these claims have, in fact, been renumbered by the Examiner. Accordingly, the numbers 21, 22 and 23 have been applied to these claims in the complete claim listing provided above in the form of an amendment in response to the Examiner's objection. If this form of response is, for any reason, not acceptable to the Examiner (such as the possibility that the Rules might be construed to require cancellation of these claims

and re-submission as claims 24 - 27), authorization is hereby given for a formal or informal Examiner's Amendment to rectify the claim numbering to the Examiner's satisfaction. If such rectification cannot be done by Examiner's Amendment, it is respectfully requested that the Examiner contact the undersigned by telephone at the number given below so that the correction may be presented in a suitable alternative form. Accordingly, it is respectfully submitted that the foregoing is fully responsive to the objection made and reconsideration and withdrawal of the same is respectfully requested.

Claims 17 and 18 have been rejected under 35 U.S.C. §102 as being anticipated by Keating et al. This ground of rejection is respectfully traversed, particularly as being moot in view of the amendment to claim 17, above.

While the Examiner appears to be correct in regard to the teaching of clipping, truncation and filtering of digital data in Keating et al., it is respectfully submitted that the filtering provided in Keating et al. does not answer the filtering recitations of claim 17. Keating et al. is directed to interpolating interleaved image fields in order to have data available for display in the event a field or a portion thereof is not received or is corrupted. Accordingly, Keating et al. provides high-pass and band-pass filtering in the horizontal and vertical directions as an enhancement to detail in the image.

In contrast, the filtering provided by the invention to reduce or eliminate perceptible flickering without introduction of additional artifacts is a correction factor for a luminance value to prevent apparent flickering between video fields when a large intensity/luminance difference (e.g. characteristic of increased image contrast or contrasting image detail which Keating et al. seeks to emphasize) is encountered

between vertically adjacent pixels of sequential (odd and even) fields and, for that reason, uses the data of one field to calculate or otherwise derive a correction value to be applied to the "corresponding" digital data of the sequential field; a process which is respectfully submitted to be aptly described by the language: "filtering respective values of said digital data with corresponding ones of said truncated digital signal values" as recited in claim 17 as originally filed (emphasis added) and which is not answered by the high-pass and/or band-pass filtering of Keating et al. since the filtering of Keating et al. filters a value computed from a truncated value (and other values) but does not filter a digital value with a truncated value of corresponding digital data (e.g. using the truncated value to determine the filtering effect or correction factor to be applied to the digital data being filtered). The high-pass and/or band-pass filtering of Keating et al. certainly does not answer the recitation of "filtering respective values of said digital data with using corresponding ones of said truncated digital signal values to determine a correction factor in accordance with a filter transfer function" of claim 17 as now amended for emphasis.

The recited filtering with the truncated values fully supports meritorious functions of the invention in providing a continuous and adjustable filter function to reduce or eliminate perceptible flickering without generation of alternative visible image artifacts while simplifying computation or storage of correction factors with reduced hardware, as discussed on pages 36 and 37 of the original specification. Such meritorious functions are neither contemplated nor realized by Keating et al. and the filtering function digital data with truncated digital data in accordance with the invention is inappropriate to the intended function of Keating et al.

Therefore, it is respectfully submitted that Keating et al. does not anticipate claims 17 and 18 either as filed or as now amended. The statement of the rejection does not make a *prima facie* demonstration of anticipation since the passage of Keating et al. which the Examiner quotes does not support the Examiner's assertion which glosses and does not reflect the clear and evident import of the recitation of "filtering...with...said truncated digital signal values"; the substance of which has been emphasized by the amendatory language presented above. Accordingly, since the stated ground of rejection is clearly in error, reconsideration and withdrawal of the same is respectfully requested.

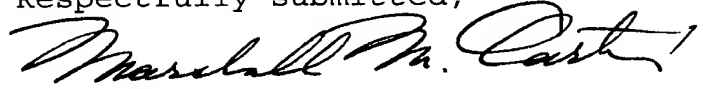
The Examiner has objected to 19 - 23 as depending from a rejected claim. This objection is also respectfully traversed as being moot since the impropriety of the rejection of claims 17 and 18 has been fully demonstrated above. Therefore, this objection is respectfully submitted to be fully answered by the above response to the rejection of claims 17 - 18 and reconsideration and withdrawal thereof is respectfully requested.

Since all rejections, objections and requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and

credit any overpayment of fees to Deposit Account No.
09-0457 of International Business Machines Corporation
(Endicott).

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Marshall M. Curtis".

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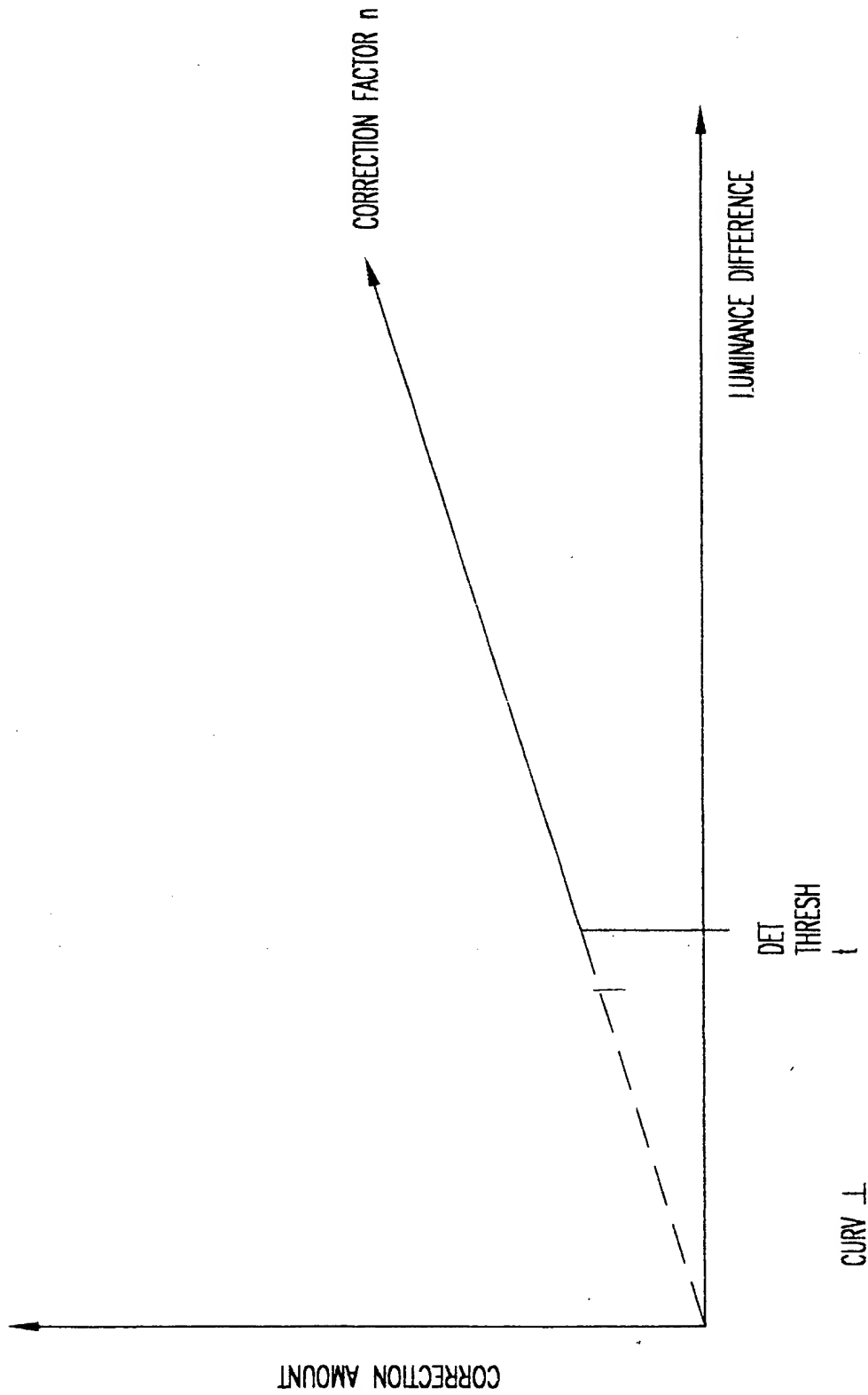


FIG. 1
Prior Art



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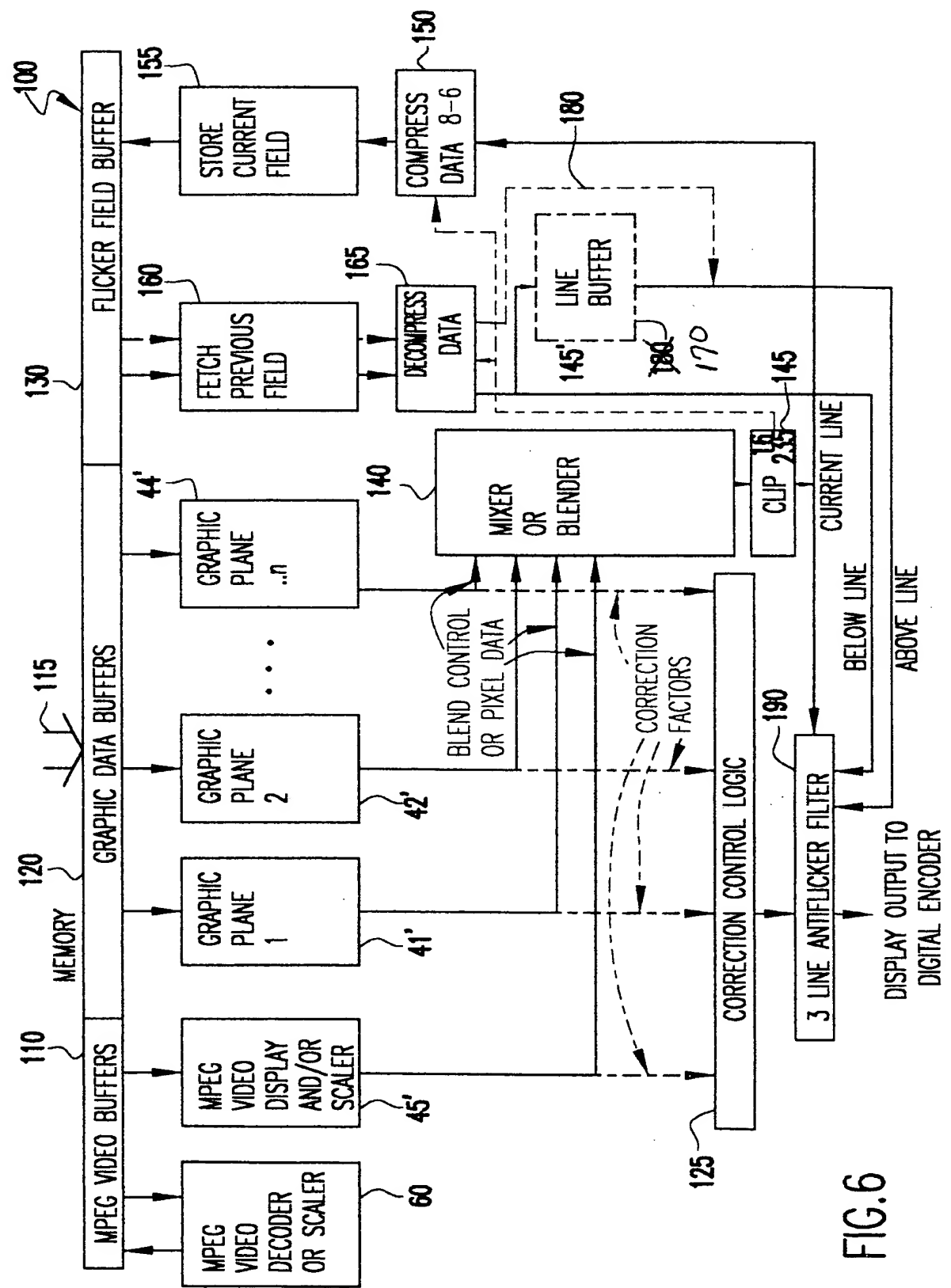


FIG. 6

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EXAMPLE OF COMPRESSION USING QUANTIZATION OF 2 BITS WITH 32 POSSIBLE EXTENDED RUN CODES

INPUT PIXEL #	<i>LUMINANCE</i> LUMINANCE DATA(8 BITS)	====> COMPRESSED DATA (8 BITS)	COMPRESSED OUTPUT DATA
1	A	A(6 BITS) "00"	0
2	B		
3	B	B(6 BITS) "01"	1
4	C	C(6 BITS) "00"	2
5	D		
6	D		
7	D		
8	D	D(6 BITS) "11"	3
9	D		
10	D		
11	D		
22	D		
23	D		
24	D	"0000" ⁰⁻¹⁶ "1111"	4
25	E		
26	E		
27	E		
28	E	E(6 BITS) "11"	5
29	E		
58	E		
59	E		
60	E	"1111" ¹⁷⁻³² "1111"	6
61	F		
62	F	F(6 BITS) "01"	7
63	G		

NOTE: || MEANS CONCATENATION

FIG. 8

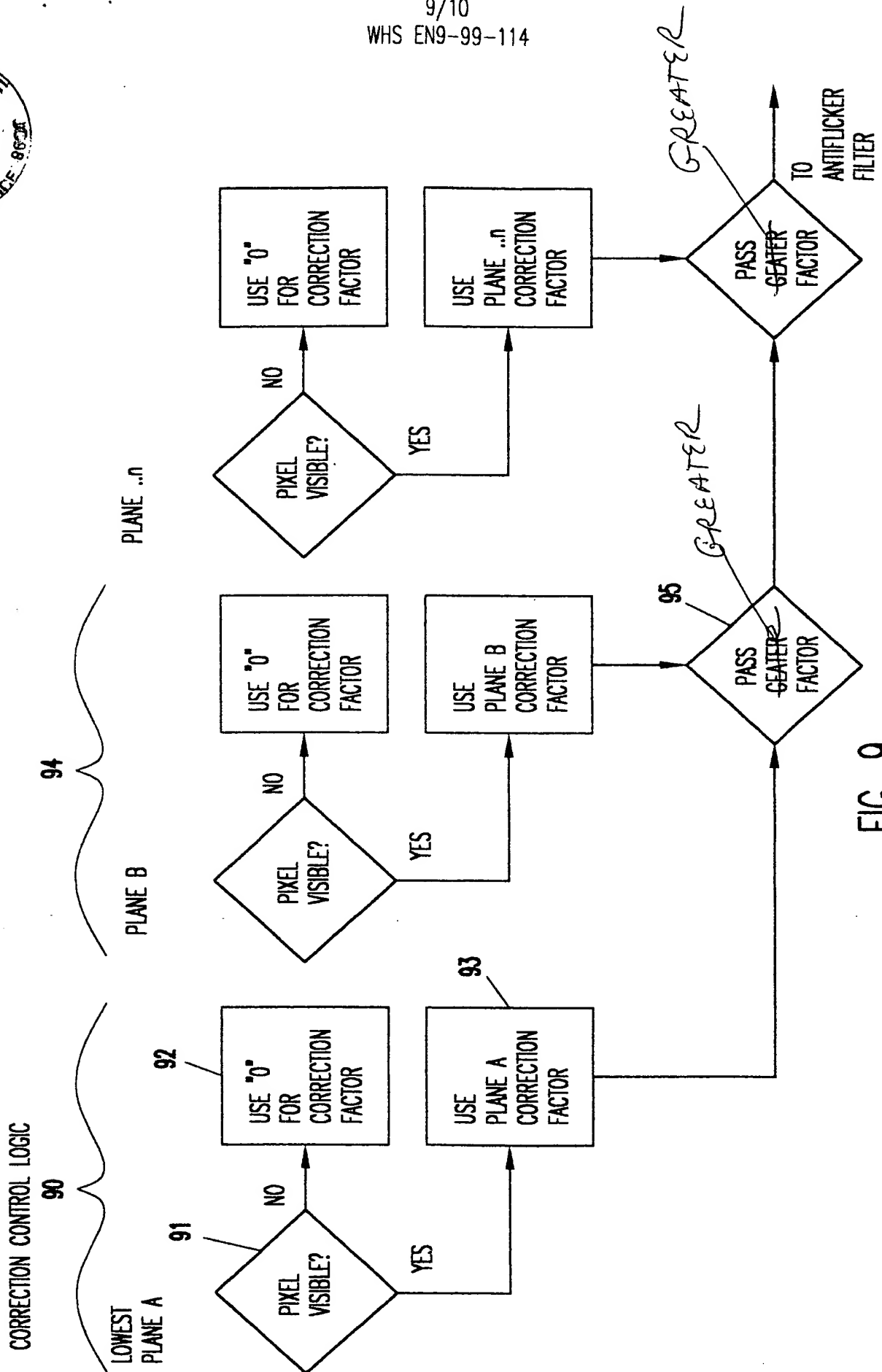


FIG. 9